



Electronic Pressure Transmitter HDA 7400 with Flush Membrane

Description:

Pressure transmitter HDA 7400 with a flush membrane was designed specifically for applications in which a standard pressure connection could become blocked, clogged or frozen by the particular medium used. Further applications include processes where the medium changes regularly and any residues could cause mixing or contamination of the media.

Like the standard model, the HDA 7400 with flush membrane has a stainless steel measurement cell with a thin-film strain gauge for relative pressure measurement in the high pressure range.

The pressure connection is achieved with a fully-sealed stainless steel front membrane filled internally with a pressure transfer fluid. The process pressure is transmitted hydrostatically to the measurement cell via the pressure transfer fluid.

The output signals 4 .. 20 mA or 0 .. 10 V permit connection to all HYDAC measuring and control devices, as well as connection to standard evaluation systems (e.g. PLC controls).

Special features:

- Pressure connection has a flush membrane
- Accuracy $\leq 0.5\%$ FS B.F.S.L.
- Highly robust sensor cell
- Very compact design
- Very small temperature error
- Excellent EMC characteristics

Technical data:

Input data

Measuring ranges	300, 500, 750, 1000, 1500, 3000, 6000, 9000 psi 1160, 1160, 1740, 2900, 2900, 7250, 11600, 13050 psi
Overload pressures	2900, 2900, 4350, 7250, 14500, 29000, 29000 psi
Burst pressures	
Mechanical connection	G1/4 A DIN 3852 G1/4 with additional front O-ring seal
Pressure transfer fluid	Silicone-free oil
Torque value	15lb·ft (20Nm)
Parts in contact with fluid ¹⁾	Connection part: Stainless steel Seal: FPM O-ring: FPM

Output data

Output signals, permitted load resistance	4 .. 20 mA, 2 conductor $R_{L_{max}} = (U_B - 8 V) / 20 \text{ mA} [\text{k}\Omega]$ 0 .. 10 V, 3 conductor $R_{L_{min}} = 2 \text{ k}\Omega$
Accuracy to DIN 16086, max. setting	$\leq \pm 0.5\%$ FS typ. $\leq \pm 1.0\%$ FS max.
Accuracy at minimum setting (B.F.S.L.)	$\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max.
Temperature compensation zero point	$\leq \pm 0.0085\%$ FS/F typ. $\leq \pm 0.017\%$ FS/F max.
Temperature compensation over range	$\leq \pm 0.0085\%$ FS/F typ. $\leq \pm 0.017\%$ FS/F max.
Non-linearity at max. setting to DIN 16086	$\leq \pm 0.3\%$ FS max.
Hysteresis	$\leq \pm 0.4\%$ FS max.
Repeatability	$\leq \pm 0.1\%$ FS max.
Rise time	$\leq 2 \text{ ms}$
Long term drift	$\leq \pm 0.3\%$ FS / year typ.

Environmental conditions

Compensated temperature range	-13..+185°F
Operating temperature range	-13..+185°F
Storage temperature range	-40..+212°F
Fluid temperature range ²⁾	-40..+212°F/-13..+212°F
CE mark	EN 61000-6-1 / 2 / 3 / 4
UL us mark ³⁾	Certificate No.: E318391
Vibration resistance according to DIN EN 60068-2-6 at 10 .. 500 Hz	$\leq 20 \text{ g}$
Protection class to IEC 60529	IP 67 (when an IP 67 female connector is used)

Other data

Supply voltage	8 .. 30 V DC 2 conductor 12 .. 30 V DC 3 conductor
when applied according to UL specifications	– limited energy – according to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950
Residual ripple of supply voltage	$\leq 5\%$
Current consumption	$\leq 25 \text{ mA}$
Life expectancy	$> 10 \text{ million cycles (0 .. 100 \% FS)}$
Weight	$\sim 80 \text{ g}$

Note: Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection are provided.

FS (Full Scale) = relative to complete measuring range

B.F.S.L. = Best Fit Straight Line

¹⁾ Other seal materials on request

²⁾ -13 °F with FPM seal, -40 °F on request

³⁾ Environmental conditions according to 1.4.2 UL 61010-1; C22.2 No. 61010-1

Model code:

HDA 7 4 Z 6 - X-XXXX - XXX - 000 - PSI

Mechanical process connection

Z = Flush membrane

Electrical connection

6 = Male M12x1, 4 pole
(female connector not supplied)

Signal

A = 4 .. 20 mA, 2 conductor
B = 0 .. 10 V, 3 conductor

Pressure ranges in psi

0300, 0500, 0750, 1000, 1500, 3000, 5000, 6000, 9000

Mechanical connection

G04 = G1/4 with additional front O-ring seal

G05 = G1/4 A DIN 3852

Modification number

000 = Standard

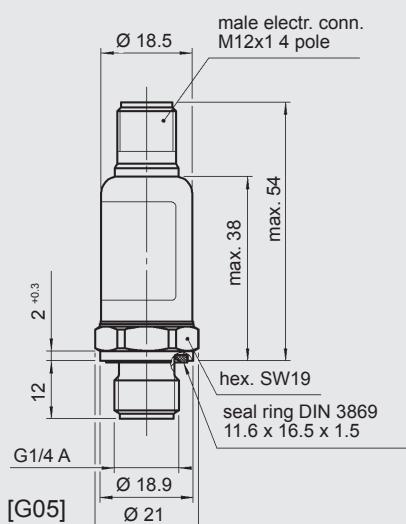
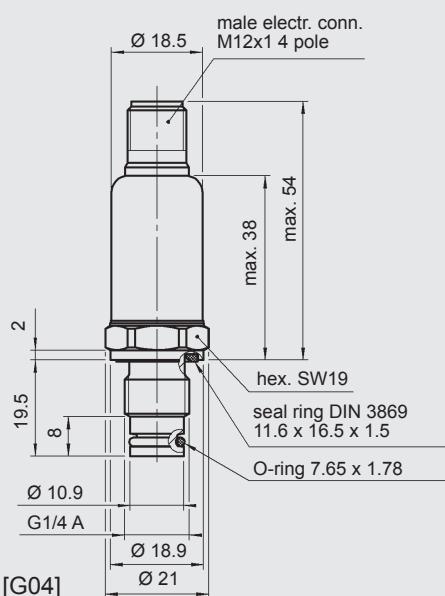
Version

PSI = Pounds per square inch

Accessories:

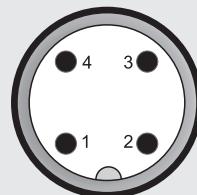
Appropriate accessories, such as electrical female connectors, can be found in the Accessories brochure.

Dimensions:



Pin connections:

M12x1



Pin	HDA 74Z6-A	HDA 74Z6-B
1	Signal+	+U _B
2	n.c.	n.c.
3	Signal-	0 V
4	n.c.	Signal

Note:

The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

For bar ranges see European Catalog

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